

THE JOURNAL OF HORTICULTURAL SCIENCE

BOARD OF EDITORS

Editor:

G. E. TIDBURY, B.Sc., A.R.C.S., A.I.C.T.A., F.I.Biol., Commonwealth Bureau of Horticulture and Plantation Crops, East Malling Research Station, Maidstone, Kent ME19 6BJ.

Associate Editors:

K. E. COCKSHULL, B.Sc., Ph.D., Glasshouse Crops Research Institute, Worthing Road, Rustington, Littlehampton, Sussex.

L. C. LUCKWILL, B.Sc., Ph.D., F.I.Biol., Mayscroft, 13 Clevedon Road, Flax Bourton, Bristol BS19 1NQ.

M. S. PARRY, B.A., M.A., East Malling Research Station, Maidstone, Kent ME19 6BJ.

A. R. REES, B.Sc., D.Sc., F.I.Biol., Glasshouse Crops Research Institute, Worthing Road, Rustington, Littlehampton, Sussex.

A. A. RUTHERFORD, M.Agr., Ph.D., East Malling Research Station, Maidstone, Kent ME19 6BJ.

P. J. Salter, B.Sc., Ph.D., National Vegetable Research Station, Wellesbourne, Warwick.

W. W. SCHWABE, D.I.C., Ph.D., D.Sc., Wye College, Nr. Ashford, Kent.

I. W. SELMAN, D.Sc., Wye College, Nr. Ashford, Kent.

R. O. SHARPLES, B.Sc., Ph.D., East Malling Research Station, Maidstone, Kent ME19 6BJ.

C. E. TAYLOR, B.Sc., Ph.D., F.I.Biol., Scottish Horticultural Research Institute, Invergowrie, Dundee, Angus.

H. D. TINDALL, M.B.E., M.Sc., F.L.S., F.I.Biol., C.I.Agr.E., N.D.H., National College of Agricultural Engineering, Silsoe, Bedford MK45 4DT.

L. D. TUKEY, B.S., M.S., Ph.D., Department of Horticulture, 103 Tyson Building, The Pennsylvania State University, University Park, PA 16802, USA.

D. VINCE PRUE, Ph.D., M.S., N.D.H., Glasshouse Crops Research Institute, Worthing Road, Rustington, Littlehampton, Sussex.

P. D. WAISTER, B.Sc., Ph.D., Scottish Horticultural Research Institute, Invergowrie, Dundee, Angus.

D. WILSON, B.Sc., Ph.D., M.I.Biol., Long Ashton Research Station, University of Bristol.

PUBLICATION COMMITTEE

J. P. HUDSON, C.B.E., M.B.E.(Mil.), G.M., M.Sc., Ph.D., N.D.H., F.I.Biol., V.M.H.(Chairman)

A. J. BEDDING, B.Sc., M.Sc., N.D.H.

D. RUDD JONES, M.A., Ph.D., F.I.Biol.

J. K. A. BLEASDALE, B.Sc., Ph.D.

W. W. SCHWABE, D.I.C., Ph.D., D.Sc.

L. BROADBENT, Ph.D., D.Sc., F.I.Biol., V.M.M.

C. E. TAYLOR, B.Sc., Ph.D., F.I.Biol.

G. E. TIDBURY, B.Sc., A.R.C.S., A.I.C.T.A., F.I.Biol.

I. J. GRAHAM-BRYCE, B.A., M.A., B.Sc., D.Phil.

H. D. TINDALL, M.B.E., M.Sc., F.L.S.,

O. V. S. HEATH, D.Sc., F.R.S.

F.I.Biol., C.I.Agr.E., N.D.H.

E. C. HERWIN, N.D.H.

F. R. TUBBS, C.B.E., M.Sc., Ph.D., F.I.Biol., V.M.H.

J. M. HIRST, D.Sc., Ph.D., F.R.S.

G. HUSSEY, Ph.D.

C. D. WALKER, B.Sc.

D. H. PITT

R. L. OXLEY (Secretary)

A. F. POSNETTE, C.B.E., Sc.D., Ph.D., A.I.C.T.A., F.I.Biol., F.R.S.

VOL. 54

1979

HEADLEY BROTHERS LTD

The Invicta Press, Ashford, Kent

England

TABLE OF CONTENTS

THE JOURNAL OF HORTICULTURAL SCIENCE, Vol. 54

No. 1 (JANUARY 1979)

J. E. GOODE, K. H. HIGGS and K. J. HYRYCZ: Effects of water stress control in apple trees by misting.	1-11
N. M. FISHER and G. BROWNING: Some effects of irrigation and plant density on the water relations of high density coffee (<i>Coffea arabica</i> L.) in Kenya.	13-22
A. N. ADAMS: The effect of gooseberry vein banding virus on the growth and yield of gooseberry and red currant.	23-25
A. D. WEBSTER, G. K. GOLDWIN, W. W. SCHWABE, P. B. DODD and D. PENNELL: Improved setting of sweet cherry cultivars, <i>Prunus avium</i> L., with hormone mixtures containing NOXA, NAA or 2,4,5-TP. ...	27-32
L. G. ISSELL and D. J. CHALMERS: The growth of clingstone peach trees (<i>Prunus persica</i> L. Batsch) propagated from hardwood cuttings in relation to time of propagation and planting.	33-38
G. R. HANKS and A. R. REES: Photoperiod and tulip growth.	39-46
A. T. K. CORKE and T. HUNTER: Biocontrol of <i>Nectria galligena</i> infection of pruning wounds on apple shoots.	47-55
H. W. B. BARLOW: Variation within the clonal apple rootstock Crab C. ...	57-61
O. P. JONES and MARGARET E. HOPGOOD: The successful propagation <i>in vitro</i> of two rootstocks of <i>Prunus</i> : the plum rootstock Pixy (<i>P. insititia</i>) and the cherry rootstock F12/1 (<i>P. avium</i>).	63-66
R. R. WILLIAMS and A. P. LEGGE: Pollen application by mechanical dusting in English apple orchards.	67-74
R. R. WILLIAMS, RUTH M. CHURCH, D. E. S. WOOD and VALERIE A. FLOOK: Use of an anthocyanin progeny marker to determine the value of hive pollen dispensers in apple orchards. ...	75-78
C. A. PONTIKIS, K. A. D. MACKENZIE and B. H. HOWARD: Establishment of initially unrooted stool shoots of M.27 apple rootstock.	79-85
W. D. LANE: Pollination of self-fertile sweet cherry.	87-89
ELSIE M. FORD: The distribution of calcium in mature apple fruits having bitter pit disorder (<i>Research Note</i>).	91-92
G.E.T. David Akenhead	93

M. LOUKAS and C. A. PONTIKIS: Pollen isozyme polymorphism in types of <i>Pistacia vera</i> and related species as an aid in taxonomy.	95-102
R. THOMPSON and P. P. RUTHERFORD: Biochemical and morphological changes in forced tulips in relation to temperature and year.	103-110
C. S. HUNTER: <i>In vitro</i> culture of <i>Cinchona ledgeriana</i> L.	111-114
P. SPIEGEL-ROY and F. H. ALSTON: Chilling and post-dormant heat requirement as selection criteria for late-flowering pears.	115-120
S. MATSUI, M. NAKAMURA and H. TORIKATA: Effects of topping at different times on the nitrogen and carbohydrate contents and growth regulator activity in sprouted lateral buds of Kyoho grapevines (<i>Vitis vinifera</i> L. × <i>V. labrusca</i> Bailey).	121-127
D. NANGJU and J. P. BAUDOUIN: Performance of winged bean (<i>Psophocarpus tetragonolobus</i> (L.) DC.) in Nigeria.	129-136
T. R. FERMOR, J. F. SMITH and D. M. SPENCER: The microflora of experimental mushroom composts.	137-147
P. ADAMS, BRENDA M. A. HART and G. W. WINSOR: Some effects of boron, nitrogen and liming on the bloom production and quality of glass-house carnations.	149-154
O. P. JONES, C. A. PONTIKIS and MARGARET E. HOPGOOD: Propagation <i>in vitro</i> of five apple scion cultivars.	155-158
W. B. CHARLES, L. AMIROUCHE and S. MALAOU: Seedlessness in <i>Capsicum annuum</i> L. var. <i>longum</i> DC. (Sendt.) (<i>Research Note</i>).	159-161
S. BAKSH and M. IQBAL: Compatibility relationships in some non-tuberous species of <i>Solanum</i> (<i>Research Note</i>).	163
J. P. M. BRENAN: Sir Edward Salisbury.	165-166

R. JONA and A. ARZONE: Control of <i>Rhagoletis cerasi</i> in cherries by γ irradiation	167-170
P. J. ORTON: The influence of water stress and abscisic acid on the root development of <i>Chrysanthemum morifolium</i> cuttings during propagation	171-180
ELSIE M. FORD and J. D. QUINLAN: The distribution of ^{45}Ca in apple fruits when supplied to the roots at three times during the season	181-188
CONSTANCE M. E. GARRETT: Screening <i>Prunus</i> rootstocks for resistance to bacterial canker, caused by <i>Pseudomonas morsprunorum</i>	189-193
A. M. ARMITAGE and M. J. TSUJITA: The effect of supplemental light source, illumination and quantum flux density on the flowering of seed-propagated geraniums	195-198
T. W. HEGARTY: Factors influencing the emergence of calabrese and carrot seedlings in the field.	199-207
S. RAM and S. PAL: Studies on the naturally occurring gibberellins in mango (<i>Mangifera indica</i> L.) fruit	209-215
L. C. LUCKWILL and J. M. SILVA: The effects of daminozide and gibberellic acid on flower initiation, growth and fruiting of apple cv Golden Delicious	217-223
P. CAMPRUBI and R. NICHOLS: Ethylene-induced growth of petals and styles in the immature carnation inflorescence	225-228
J. N. KNIGHT: Chemical defoliation of nursery stock. I. Initial experiments with fruit tree material	229-234
A. C. BUNT: Cropping of the carnation (<i>Dianthus caryophyllus</i> L.) as affected by date of planting and by removing the apical bud	235-242
G. J. P. SINGH: Effect of washing and mechanical trimming on insecticide residues in cabbage. (Research Note)	243-245

- P. E. GRIMBLY: Leaf distortion, a cytoplasmically determined variant of tomato silvering ... 247-255
- A. DALE: Varietal differences in the relationships between some characteristics of red raspberry fruiting laterals and their position on the cane 257-265
- A. T. JONES: The effects of black raspberry necrosis and raspberry bushy dwarf viruses in Lloyd George raspberry and their involvement in raspberry bushy dwarf disease ... 267-272
- D. J. JAMES: The role of auxins and phloroglucinol in adventitious root formation in *Rubus* and *Fragaria* grown *in vitro* ... 273-277
- J. NEGUEROLES and O. P. JONES: Production *in vitro* of rootstock/scion combinations of *Prunus* cultivars ... 279-281
- L. J. VAN LELYVELD and J. H. E. SMITH: Physiological factors in the maturation and ripening of mango (*Mangifera indica* L.) fruit in relation to the jelly-seed physiological disorder ... 283-287
- K. W. BAILISS and V. N. OKONKWO: Virus infection of spinach (*Spinacia oleracea* L.) in Britain ... 289-297
- R. O. SHARPLES, M. S. REID and N. A. TURNER: The effects of post-harvest mineral element and lecithin treatments on the storage disorders of apples ... 299-304
- P. R. GILLIS: The relationship between plant density and crop yield when depressions in yield per plant are observed at low densities ... 305-307
- D. J. JAMES and ISOBEL J. THURBON: Rapid *in vitro* rooting of the apple rootstock M.9 ... 309-311
- A. GUR, J. HEPNER and Y. SHULMAN: The influence of root temperature on apples trees. IV. The effect on the mineral nutrition of the tree ... 313-321
- J. B. SWEET, D. R. CONSTANTINE and T. R. SPARKS: The elimination of three viruses from *Daphne* spp. by thermotherapy and meristem excision ... 323-326
- P. VAN LUNE and B. J. VAN GOOR: Extractability of calcium from apple fruit and apple leaf tissue and the occurrence of bitter pit ... 327-331
- G. W. F. SEWELL and G. C. WHITE: The effects of formalin and other soil treatments on the replant disease of apple ... 333-335
- K. E. COCKSHULL, J. S. HORRIDGE and F. A. LANGTON: Ethephon and the delay of early budding in chrysanthemums (*Research Note*) ... 337-338

